Aviation Investigation Final Report

Location:	MANCHESTER, New Hampshire	**Accident Number:**	IAD96LA117
Date & Time:	July 15, 1996, 05:45 Local	**Registration:**	N4391W
Aircraft:	Beech A100	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 None
Flight Conducted Under:	Part 91: General aviation - Positioning		

Analysis

While executing a coupled ILS approach to runway 35, at about 100 feet above decision height the localizer bar went hard right, the glide slope flag came out and the aircraft turned hard right. The pilot turned the yoke left to counter-act just as the localizer bar went hard left. The aircraft immediately tried to follow and was still in a descent. The pilot countered with opposite yoke and felt for the autopilot disconnect button on the yoke. While attempting to climb the aircraft struck a light pole approximately 1.5 miles off the departure end of runway 35, causing substantial damage to the nose landing gear wheel assembly and left wing spar. Examination of the ILS by the FAA found that the glideslope equipment was out of service, but that the localizer, outer marker, and middle marker equipment was operational.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilots failure to maintain control of the aircraft during a coupled approach. A related factor was the unmonitored inoperative glide slope.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: APPROACH

Findings
1. (F) OBJECT - UTILITY POLE

2. (C) AIRCRAFT CONTROL - NOT MAINTAINED - PILOT IN COMMAND
3. (C) COMPLACENCY - PILOT IN COMMAND
4. (F) APPROACH AIDS,ILS GLIDE SLOPE - INOPERATIVE

Factual Information

HISTORY OF FLIGHT

On July 15, 1996, at about 0545 eastern daylight time, N4391W, a Beech A100, owned and operated by Causey Aviation Service Inc., was substantially damaged when it collided with a light pole about 2 miles beyond the departure end of the runway, while attempting an instrument approach to the Manchester Airport (MHT), Manchester, New Hampshire. The certificated airline transport pilot was not injured. Instrument meteorological conditions existed, and an Instrument Flight Rules (IFR) flight plan was filed. The positioning flight originated from Liberty, North Carolina, about 0315, and was operated under 14 CFR Part 91.

In a written statement, the pilot stated that he had departed Liberty for Manchester to pick up a NASCAR Race Team, and was to then return to Liberty. He said that he received his IFR clearance from Greensboro Approach, and had been cleared as filed.

The pilot noted on his instrument panel that while flying over Philadelphia, Pennsylvania, the airplane's outer marker and middle marker lights began flashing, and he noted the same occurrence when he passed over New York City, New York. He said that approximately 120 miles from Manchester, he received the ATIS which stated the weather conditions, which included an RVR of 5,000 feet with fog, a ceiling of 10,000 feet, a barometric pressure of 29.94, and that the ILS to runway 35 was unmonitored. About 45 miles from Manchester he received a special weather report over the ATIS that the RVR had decreased to 3,000 feet.

Manchester approach gave the pilot radar vectors and a descent for the ILS approach to runway 35. The pilot stated that his last instruction from approach control was to turn left to 030 degrees to intercept the localizer inbound, descend to 2,600 feet, and upon interception of the localizer was cleared for the ILS approach to runway 35. He was also instructed to contact the tower at that time. He said that he had previously set in the ILS frequency on both VOR's and received a strong ID signal. He said the localizer bar started moving from the right toward center, and the glide slope bar was showing up. He said he engaged the auto pilot for a coupled ILS approach and the airplane captured the ILS and started turning inbound.

The pilot stated that when the airplane was within 100 feet of decision height the localizer bar went hard right, the glide slope flag came out, and the airplane turned hard right. He turned the yoke left to counter-act just as the localizer bar went hard left. The airplane immediately tried to follow and was still in a descent. He countered with opposite yoke and felt for the autopilot disconnect button on the yoke. He said he never heard or saw the middle marker and he never saw runway lights or the ground. He said that he had no idea how low or where he was because he was struggling to gain control of the aircraft as he disconnected the autopilot.

The pilot further stated:

"I knew I was in serious extremus [trouble] as I pushed the props and throttles forward, pulled the nose up and hit the flap handle up. I was reaching for the gear handle when I looked out and saw a tree line coming toward me out of the fog. At the same time I glimpsed two light poles (similar to street lights) out my left window. There was a loud and solid thump on the nose of the aircraft just as I brought the gear handle up."

The pilot stated that following the collision with the light pole, he proceeded to the Burlington Airport, Burlington, Vermont. He said that although the weather was VFR, he elected to fly the ILS approach to runway 15 in order to "..check my equipment." The pilot stated, that he did not perform a auto pilot approach but just monitored localizer, glide slope, and marker beacon indications. The pilot said the ILS performed just as it should during his practice approach. The pilot landed at Burlington on the main landing gear and allowed the nose section of the fuselage to settle to the runway as the speed decreased. There was no post-landing fire.

The airplane struck a light pole approximately 1.5 miles beyond the departure end of runway 35.

EXAMINATION OF THE ILS

The FAA Airways Facilities Office in Manchester, New Hampshire, revealed that the Manchester area had experienced thunderstorm activity the evening of July 14, 1996, and electrical activity from the storms had disabled the ILS monitoring equipment. An Airways Facilities technician dispatched to investigate the problem found the ILS monitoring equipment out of service, but the localizer and glideslope equipment operational. The technician departed the site around midnight. The ILS monitoring equipment was notamed out-of-service.

Following the accident, an Airways Facilities technician arrived back on site approximately 0730, July 15, 1996. The technician found the glideslope equipment out of service. The localizer, outer marker, and middle marker equipment were found operational. The ILS monitoring equipment remained out of service. The technician was unable to ascertain the time of failure of the glideslope equipment.

A Saab 340 commuter airplane on a positioning flight following N4391W, reported they did not receive a glideslope signal. Following a repair of the glideslope equipment, an operational flight check was performed on the runway 35 ILS by a FAA Flight Inspection airplane, which showed the ILS to be operating normally.

Pilot Information

Certificate:	Airline transport	**Age:**	60,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 1 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	May 1, 1996
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	7991 hours (Total, all aircraft), 249 hours (Total, this make and model), 5830 hours (Pilot In Command, all aircraft), 40 hours (Last 90 days, all aircraft), 10 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N4391W
Model/Series:	A100 A100	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	B191
Landing Gear Type:	Retractable - Tricycle	**Seats:**	10
Date/Type of Last Inspection:	June 14, 1996 AAIP	**Certified Max Gross Wt.:**	11500 lbs
Time Since Last Inspection:	51 Hrs	**Engines:**	2 Turbo prop
Airframe Total Time:	8985 Hrs	**Engine Manufacturer:**	P&W
ELT:	Installed, not activated	**Engine Model/Series:**	PT6A-28
Registered Owner:	CAUSEY AVIATION SERVICE INC.	**Rated Power:**	680 Horsepower
Operator:	LEON STEPHENS VENTERS, JR.	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	EWCA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Dawn
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:	Thin Overcast / 600 ft AGL	**Visibility**	0.25 miles
Lowest Ceiling:	Overcast / 600 ft AGL	**Visibility (RVR):**	5000 ft
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	180°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30 inches Hg	**Temperature/Dew Point:**	21°C / 19°C
Precipitation and Obscuration:	N/A - None - Fog		
Departure Point:	LIBERTY , NC (2A5)	**Type of Flight Plan Filed:**	IFR
Destination:	(MHT)	**Type of Clearance:**	IFR
Departure Time:	03:15 Local	**Type of Airspace:**	Class C

Airport Information

Airport:	MANCHESTER MHT	**Runway Surface Type:**	Macadam
Airport Elevation:	234 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	35	**IFR Approach:**	ILS
Runway Length/Width:	7001 ft / 150 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	

Administrative Information

Investigator In Charge (IIC):	Wilson, Butch
Additional Participating Persons:	JOHN WOOD; PORTLAND , ME
Original Publish Date:	March 31, 1998
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=28084